

23
concluded

AC power.--

IN THE ABSTRACT OF THE DISCLOSURE:

Line 11, delete "means" insert "--device--".

REMARKS

By the above amendment, claims 1 and 15 have been amended to recite an additional feature of the AC/DC converter, with claims 1 and 3 also being amended to clarify features of the present invention in a manner which should overcome the rejection of the claims under 35 U.S.C. §112, second paragraph. Additionally, new dependent claims 19 and 20 have been presented.

With regard to the objection to the drawing that the plurality of power supply units connected in parallel wherein each of the power supply units include the limitations of claim 15 must be shown or the features canceled from the claims, applicants note that such features are illustrated in Fig. 5 of the drawings of this application. As illustrated therein, two units are connected in parallel as evident by the two rectangles labeled "UNIT". Due to the fact that the upper "UNIT" having the construction of the AC/DC converter 1, DC/DC converter 2, DC converter 3, battery 4 and charger 6 is illustrated as lying above the below illustrated "UNIT", the below "UNIT" which has the same construction cannot be shown

in the drawings other than by the rectangular outline. However, the lines connecting to the input and the load shows this parallel configuration and such is described at page 15, line 23 to page 16, line 7. Thus, applicants submit that the recited features of claim 15 are illustrated therein. As such, applicants submit that further illustration should be unnecessary.

Turning to the rejection of claims 1-14 under 35 U.S.C. §112, second paragraph, this rejection is traversed insofar as it is applicable to the present claims. The Examiner notes that claim 1 recites the limitation "said output voltage to said load" in line 9 and there is insufficient antecedent basis for this limitation in the claim. Applicants note that lines 6-8 of claim 1 recites the feature of "an output voltage of said DC/DC converter...a load", and by the present amendment, line 9 has been amended to recite "said output voltage of said DC/DC converter having a level thereof controlled to said load" so as to clearly represent the previous antecedent basis for such limitation. Accordingly, the rejection of claim 1 under 35 U.S.C. §112, second paragraph, should now be overcome.

With respect to claim 2, the Examiner indicates that the limitation "said DC converter supply said electric power" in line 4 lacks antecedent basis. Applicants note that claim 1 recites the feature of "a DC power storage means which

supplies electric power to said DC/DC converter through said DC converter", claim 1 also reciting the feature of "a DC converter which is connected to an input of said DC/DC converter". Claim 2 which depends from claim 1 recites in lines 4-6 that "said DC converter supplies said electric power received from said DC power storage means to said input of said DC/DC converter" and such features are provided with antecedent basis in the aforementioned lines of claim 1. Thus, applicants submit that claim 2 should be considered to be in compliance with 35 U.S.C. §112, second paragraph.

The Examiner notes that claims 3 and 5 suffer from the same deficiency as claim 2 and by the present amendment, claim 3, line 3 has been amended to change "maintain electric power enough" to "maintain sufficient electric power output". However, with respect to the limitation of claim 3 corresponding to that of claim 2, the antecedent basis for such limitation, like claim 2, is found in claim 1 as indicated above. With respect to claim 5, this claim recites "said DC converter output said electric power from said AC/DC converter" and it is noted that by the amendment of claim 3, it is apparent that antecedent basis is provided for said AC/DC converter outputting electric power. Thus, applicants submit that claims 3 and 5 should also now be considered to be in compliance with 35 U.S.C. §112, second paragraph, and the remaining claims also should be considered to be in compliance

with 35 U.S.C. §112, second paragraph.

As to the rejection of claims 1-13 under 35 U.S.C. §102(b) as being anticipated by Yeh and the rejection of claims 14-18 under 35 U.S.C. §103(a) as being unpatentable over Yeh in combination with Kageyama, such rejections are traversed insofar as they are applicable to the present claims, and reconsideration and withdrawal of the rejections are respectfully requested.

At the outset, applicants note that independent claims 1 and 15 have been amended to recite the feature that the AC/DC converter includes a control circuit which controls the DC power output from the AC/DC converter. Applicants note that such control circuit is represented by the control circuit 11 illustrated in Fig. 3 of the drawings of this application and described at page 10, line 23 to page 11, line 9. More particularly, as indicated, "the control circuit 11 controls the output voltage of the AC/DC converter 1 to be equal to a predetermined DC voltage on the basis of the ON/OFF actuation of a semiconductor switching device of the main circuit 12" and further, "the control circuit 11 has a power-factor improvement function and hence performs controlling to suppress harmonic current in the AC input". Applicants note that dependent claims recite the further features of the control circuit as described above. Additionally, it is apparent that as described in the specification at page 14,

lines 4-9, page 15, lines 23-28, page 16, lines 18-23, page 18, lines 14-18 and page 19, lines 13-17, each of Figs. 4-8 have a construction corresponding to that as illustrated in Figs. 2 and 3, such that in all disclosed embodiments, the AC/DC converter includes a control circuit operating in the manner defined.

Turning to the patent to Yeh, applicants note that irrespective of the Examiner's comments, this patent does not disclose or teach an AC/DC converter having a control circuit and operating in the manner set forth in claim 1 for controlling an output voltage of the DC power outputted by the AC/DC converter 1. As such, applicants submit that independent claim 1 and the dependent claims patentably distinguish over Yeh in the sense of 35 U.S.C. §102, and should be considered allowable thereover.

As to the combination of Yeh with Kageyama, applicants note that the Examiner contends that Yeh discloses the claimed invention except for parallel connecting a plurality of converters or modules which is disclosed by Kageyama. Irrespective of the Examiner's contentions, as pointed out above, Yeh does not disclose an AC/DC converter having a control circuit operating in the manner defined, and such feature is also not disclosed by Kageyama. Assuming arguendo that the first device 15 of Yeh represents an AC/DC converter in that there is provided a AC input and a DC output, it is

readily apparent that the disclosed features do not provide a control circuit which controls the output voltage of the AC/DC converter, as recited in independent claims 1 and 15.

Accordingly, the proposed combination fails to disclose or teach the claimed features in the sense of 35 U.S.C. §103, and the features as recited in independent claims 1 and 15 and the dependent claims thereof when considered together with the dependent claims, patentably distinguish over Yeh and Kageyama taken alone or in any combination thereof in the sense of 35 U.S.C. §103, and should be considered allowable thereover.

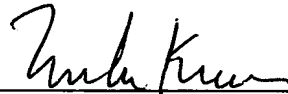
As noted above, new dependent claims 19 and 20 have been added wherein claim 19 depends from claim 1 and further recites the feature that said control circuit controls said output voltage of said DC power of said AC/DC converter to be equal to a predetermined DC voltage on the basis of an ON/OFF actuation of a semiconductor switching device of a main circuit of said AC/DC converter and controls to suppress harmonic current in the received AC power. New dependent claim 20 which depends from claim 15 recites the same features and applicants submit that these additional features are not disclosed or taught in the cited art, and such claims should also be considered allowable at this time.

In view of the above amendments and remarks, applicants submit that all claims present in this application should be considered to be in compliance with 35 U.S.C. §112, second

paragraph, and patentably distinguish over the cited art, such that issuance of an action of a favorable nature is courteously solicited.

To the extent necessary, applicant's petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 01-2135 (500.38034X00) and please credit any excess fees to such deposit account.

Respectfully submitted,



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